

SOV/79-29-1-69/74

## Steroids. II. Synthesis of Progesterone From Solasodine

other not identified by-products. No details as to reaction conditions and yield were given. It must be emphasized that the transformation of (I) into (IV) can take place in three stages without by-products, however, the exact reaction procedure has hitherto not been found. In contrast with the acetate of the structurally close diosgenine in the case of heating solasodine with acetic acid anhydride the result is not compound (IV) but a completely resinified product. It was found that the oxidizing separation of the double bond (II)  $\rightarrow$  (III) takes place most favorably by oxidation with  $\text{Na}_2\text{Cr}_2\text{O}_7$  in acetic acid at room temperature. It is possible to carry out the separation of the side chain under formation of the  $\Delta^{16(17)}$  double bond (III)  $\rightarrow$  (IV) in an alkali as well as in an acid medium. In the case of an acid medium the reaction of solasodine into the final product (IV) occurs very smoothly. The yield in the latter amounted to 44% as calculated for (I). This compound is not only the initial product for the synthesis of progesterone and cortisone but also of other steroid hormones (Refs 6-8). The further transformation of (IV) into progesterone was carried

Card 2/3

SOV/79-29-1-69/74

Steroids. II. Synthesis of Progesterone From Solasodine

out according to Butenandt, Schmidt-Thomé, Oppenauer  
(Refs 9,10). There are 13 references, 4 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-  
cheskiy institut imeni S. Ordzhonikidze (All-Union Scientific  
Chemo-Pharmaceutical Research Institute imeni  
S. Ordzhonikidze)

SUBMITTED: November 1, 1957

Card 3/3

SUVOROV, N.N.; SOKOLOVA, L.V.; MAKAROV, N.V.

Reaction between methylmagnesium iodide and steroid ketoxides.  
Izv. AN SSSR.Otd. khim. nauk no.12:2257-2258 D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut im.S.Ordzhonikidze i Institut khimii prirodnikh soyedineniy  
AN SSSR.

(Magnesium compounds)

(Steroids)

SUVOROV, N.N.; NOVIKOVA, V.M.; SOKOLOVA, L.V.; KOVYLKINA, N.F.

Microbiological transformation of cortisone with the aid of  
mycobacteria B<sub>5</sub>. Med.prom. 14 no.1:22-24 Ja '60. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S. Ordzhonikidze.  
(CORTISONE)

SOKOLOVA, L.V.

Scientific conference on "study, preparation, and use of steroid  
hormones." Med. prom. 14 no.7:62-64 Je '60. (MIRA 13:2)  
(HORMONES--CONGRESSES)

SUVOROV, N.N.; NIKIFOROVA, O.K.; SOKOLOVA, L.V.; KOVYLKINA, N.F.; LEYBEL'MAN,  
F.Ya.

New synthesis of Reichstein's substance "S." Med.prom. SSSR 14 no.12:  
9-12 D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S. Ordzhonikizde.  
(CORTICOSTERONE)

SUBOROV, N.V.; SOKOLOVA, L.V.; RYZHKOVA, V.M.; ZAYKINA, D.M.

Microbiological deacetylation of corticosteroid 21-acetates.  
Dokl.AN SSSR 132 no.6:1325-1326 Je '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut im. S.Ordzhonikidze. Predstavleno akademikom M.M.  
Shemyakinym.

(Corticosteroids)

SUVOROV, N.N.; SOKOLOVA, L.V.; MAKAROV, N.V.

Interaction between organolithium compounds and steroid keto oxides.  
Izv.AN SSSR.Otd.khim.nauk no.5:934, My '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im.  
S.Ordzhonikidze i Institut khimii prirodnkh soyedineniy AN SSSR.  
(Lithium organic compounds) (Steroids)



FEDOROVICH, M.M.; CHEREYSKAYA, N.N.; SOKOLOVA, L.V.; TOBELKO, I.L.

Computation of the technical and industrial plan of a chemical enterprise by the method of matrix calculus. Khim. prom. no.9: 44-49 S '61. (MIRA 15:1)

1. Moskovskiy inzhenerno-ekonomicheskiy institut imeni Sergo Ordzhonikidze.

(Chemical plants)

SOKOLOVA, L.V.; KOVYLKINA, N.F.; SUBOROV, N.N.

Production of  $\Delta^1$ -dehydrocortisone from dihydrocortisone  
acetate. Med. prom. 15 no.6:15-17 Je '61. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev-  
ticheskiy institut imeni S. Ordzhonikidze.  
(PREGNADIENETRIONE)

SUVOROV, N.N.; SOKOLOVA, L.V.; YAROSLAVTSEVA, Z.A.; OVCHINNIKOVA, Zh.D.  
Murasheva, V.S.; LEYBEL'MAN, F.Ya.

Steroids. Part 15: Synthesis of cortisone-acetate from 3 -pregnane-  
17 -diol-11,20-dione. Zhur. ob. khim. 31 no. 11:3715-3718 N '61.  
(MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S. Ordzhonikidze.  
(Cortisone) (Pregnanediol)

SUVOROV, H.N.; SOKOLOVA, L.V.; RYZHIKOVA, V.M.; DVORYANTSEVA, G.G.

Microbiological 20  $\alpha$ -reduction of keto steroids with the aid of  
Bacillus megatherium. Dokl. AN SSSR 152 no.5:1130-1131 O '63.  
(MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut im. S.Ordzhenikidze i Institut khimii prirodnikh  
soyedineniy AN SSSR. Predstavleno akademikom M.M.Shemyakinym.

1. Introduction

The effect of periodicity of the mitotic cell division and glycogen content in the liver of white rats. *Biol. dokl. akad. nauch. SSSR* 1964, 18: 11-12. (MIRA 18: 2)

. Laboratoriya gistofiziologii (rav. - kand. bio. i med. nauk  
prof. I.N. Pavlovskiy) Instituta eksperimental'noy biologii (dir. -  
prof. I.N. Myadly) AMN SSSR, Moscow. Submitted July 30, 1963.

L 27419-66

ACC NR: AP6017695

SOURCE CODE: UR/0220/65/034/003/0407/0410

AUTHOR: Ryzhkova, V. M.; Sokolova, L. V.; Suvorov, N. N.

ORG: All-Union Chemical and Pharmaceutical Scientific Research Institute im. S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut) 14  
B

TITLE: Deacetylation of steroid acetates by means of Bacillus megatherium

SOURCE: AN SSSR. Mikrobiologiya, v. 34, no. 3, 1965, 407-410

TOPIC TAGS: bacteria, bacteriology, enzyme

ABSTRACT: Bac. megatherium was found to possess high esterase activity with respect to the acetyl group in the 21st position of the steroid molecule. Acetyl groups in positions 3-beta and 17-beta were deacetylated rather slowly by the microorganism. The steroid esterase of Bac. megatherium was quite inert with respect to the 11 alpha-acetylhydroxy group. The process of deacetylation of the acetyl groups in position 20 was found to be stereospecific. The alpha-orientation of the acetyl group made it inaccessible to the esterase of Bac. megatherium, whereas the beta-oriented acetyl group was deacetylated as easily as the 21-acetyl group. Orig. art. has: 1 formula and 1 table. [JPRS]

SUB CODE: 06 / SUBM DATE: 31May64 / ORIG REF: 001 / OTH REF: 012

Card 1/1 *20*

UDC: 576.8:577.153 2

L 29364-66 ENT(1)/ETC(f) IJP(c) AT

ACC NR: AP6018055

SOURCE CODE: UR/0020/66/168/003/0554/0555

AUTHOR: Malyshev, G. M.; Ostrovskaya, G. V.; Razdobarin, G. T.; Sokolova, L. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-  
tekhnicheskii institut Akademii nauk SSSR)

TITLE: Determination of temperature and electron concentration in a plasma arc from  
Thompson scattering of laser radiation

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 554-555

TOPIC TAGS: laser, electron density, plasma arc, ~~Thompson scattering~~, plasma diag-  
nostics

ABSTRACT: The temperature and electron concentration in a d-c plasma arc in a mag-  
netic field were determined from the scattering of laser radiation. The experimental  
arrangement is shown in Fig. 1. The duration of the 25-j ruby laser operating at



Fig. 1. Experimental arrangement

RL - Ruby laser; L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub> - lenses; D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub> -  
diaphragms; W<sub>1</sub>, W<sub>2</sub> - windows; DT - discharge tube;  
P - prism; M - monochromator; PH - photomultiplier;  
OSC - oscillograph.

UDC: 533.9.07

Cord 1/3

L 29364-66

ACC NR: AP6018053

$\lambda = 6943 \text{ \AA}$  was 0.5  $\mu\text{sec}$ . The 800-Oe magnetic field was parallel to the discharge axis. The laser radiation was observed at a  $90^\circ$  angle from the incident radiation. This radiation was collected by lens  $L_3$  from a volume 7 mm long and 0.6 mm in diameter into a solid angle of  $1/32$  steradian. The discharge tube had a 50-mm diameter. The plasma under investigation was at the center of the discharge tube, 140 mm from the cathode. The laser pulse was activated in the middle of the discharge, the duration of which was several dozen seconds. The pressure of the helium flow in the tube was 0.2 mm Hg. Rayleigh scattering was used to calibrate the system. The slit width of the monochromator was 10  $\text{\AA}$ . The experimental results are shown in Fig. 2.

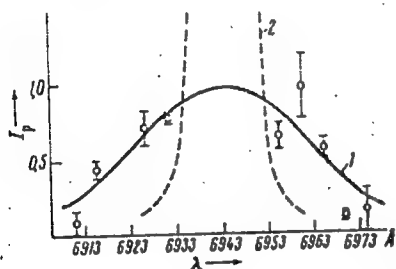


Fig. 2. The curve of the laser radiation scattered by electrons (1) and the curve of parasitically scattered light (2)

The electron temperature determined from the halfwidth of the curve of Fig. 2 was  $T_e = 1.8 \text{ eV}$ . The electron concentration was determined to be  $2.5 \times 10^{13} \text{ cm}^{-3}$ .

Card 2/3



L 29364-66

ACC NR: AP6018053

Since the parameter  $\alpha$  (The Physics of Fluids, no. 8, 1965, p. 208) was calculated to be much smaller than 1, the scattering of laser radiation by electrons was attributed to Thompson scattering. Orig. art. has: 2 figures. [CS]

SUB CODE: 20/ SUBM DATE: 13Jul65/ ORIG REF: 003/ OTH REF: 006/ ATD PRESS: 5008

Card 3/3 *dc*

SKRYABIN, G.K.; ZVIAGINTSEVA, I.S.; SOKOLOVA, L.V.

Transformation of hydrocortisone, cortisone and their  
derivatives by a culture of Mycobacterium sp. 193. Izv.  
AN SSSR. Ser. biol. no.5:715-720 S-O '64. (MIRA 17:9)

1. Institut mikrobiologii AN SSSR, Moskva.

RYZHKOVA, V.M.; SOKOLOVA, L.V.; SUVOROV, N.N.

Deacetylation of steroid acetates with the help of *Bacillus megaterium*. *Mikrobiologiya* 34 no.3:407-410 My-Je '65.

(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.

SKRYABIN, G.K.; ZVYAGINTSEVA, I.S.; NAZARUK, M.I.; SOKOLOVA, L.V.

Effect of oxidation-reduction potential on the transformation of  
hydrocortisone by the Mycobacterium globiforme 193 culture. Dokl.  
AN SSSR 161 no.2:472-474 Mr '65. (MIRA 18:4)

1. Institut mikrobiologii AN SSSR. Submitted October 2, 1964.

SOKOLOVA, L.V.

Mitotic activity in white rats during medication sleep. Biul.  
eksp.biol. i med. 48 no.7:95-99 J1 '59. (MIRA 12:10)

1. Iz laboratorii gistofiziologii (zav. - kand.biolog.nauk V.H.  
Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof.  
I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym  
chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym).  
(CELL DIVISION)  
(SLEEP)

SOKOLOVA, L.V.

Change in the mitotic activity in injured rat corneal epithelium during medication sleep. Biul.eksp.biol.i med. 53 no.6:77-80 '62. (MIRA 15:10)

1. Iz laboratorii gistofiziologii (zav. - kand.biologicheskikh nauk V.N.Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof. I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym.  
(SLEEP THERAPY) (KARYOKINESIS) (CORNEA)

MALYSHEV, G.M.; RAZDOBARIN, G.T.; SOKOLOVA, L.V.

Use of an electron-optical light amplifier with a Fabry-Perot etalon  
and a monochromator for time scanning of the spectrum. Dokl. AN SSSR  
145 no.4:768-770 Ag '62. (MIRA 15:7)

1. Fiziko-tekhnicheskiy inġstitut im. A.F.Ioffe AN SSSR.  
Predstavleno akademikom B.P.Konstantinovym.  
(Electron optics) (Spectrum analysis)

SOKOLOVA, L.V.; RYZHKOVA, V.M.; SKRYABIN, G.K.; SUVOROV, N.N.

Structure of a product of microbiological conversion of  
cortisone by means of Mycobacterium B5. Med. prom. 15  
no.11:29-31 N '61. (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S.Ordzhonikidze.  
(CORTISONE) (MYCOBACTERIUM)



MALYSHEV, G.M.; RAZDOBARIN, G.T.; SOKOLOVA, L.V.

Use of a Fabry-Perot etalon with a monochromator and an electron-optical amplifier for time-base scanning of the spectrum. Zhur.tekh.fiz. 33 no.2:191-199 F '63. (MIRA 16:5)

1. Fiziko-tekhnicheskii institut AN SSSR imeni A.F.Ioffe, Leningrad.

(Interferometer) (Amplifiers (Electronics))  
(Monochromator)

DOBROKHOTOV, V.N.; MARKELOVA, I.V., SOKOLOVA, L.V., TIMASHKEVICH T.V.;  
NIKANOROVA, R.I.; KURDYUMOVA, A.G.

Effect of sarkolysine on the 24-hour periodicity of mitoses in  
some tissues of white rats. Biul. eksp. biol. i med. 57 no.3:  
97-102 Mr '64.

(MIRA 17:11)

1. Laboratoriya gistofiziologii (zav. - kand. biol. nauk V.N.  
Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof.  
I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'ny  
chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

DOBROKHOTOV, V.N.; MARKELOVA, I.V.; SOKOLOVA, L.V.; TIMASHKEVICH, T.B.;  
NIKANOROVA, R.I.; KURDYUMOVA, A.G.

Effect of the time of injection of sarcolysine on the change in  
the mitotic activity of the tissues of white rats. Trudy MOIP.  
Otd. biol. 11:165-185 '64. (MIRA 18:1)

1. Laboratoriya gistofiziologii Instituta eksperimental'noy  
biologii AMN SSSR.

GERSHUN, M.Y. [Hershun, M.I.]; SOKOLOVA, L.Yu.

Some potentials for the increase of labor productivity in the enterprises of the light industry of the former Lugansk Economic Council. (MIRA 16:4)  
Leh.prom. no.1:86-87 Ja-Mr '63.

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti (for Gershun). 2. Byvshiy Luganskiy sovet narodnogo khozyaystva (for Sokolova).

VERESHCHAGIN , I.[translator]; BAZUTKIN , V.[translator]; SOKOLOVA,M.....  
[translator]; RAZEVIK, D.V., red.; ZHAKOV, Ye., red.;  
DOTSENKO, V., tekhn. red.

[Plasma and electrostatic rocket engines] Plazmennye i elektro-  
sticheskie raketnye dvigateli. Moskva, Izd-vo inostranoi  
lit-ry, 1962. 168 p. Translated from the (MIRA 16:6)  
English.

(Rockets (Aeronautics))

SONOLEVA, M. A.

"Topographo-anatomic data on the innervation of suprarenals and kidneys in cattle",  
(SBS, Department of Normal Anatomy). Collected Works No. 14, of Leningrad Veterinary  
Institute USSR Ministry of Agriculture, P 150, Sel'khozgiz, 1954.

USSR/Diseases of Farm Animals - Diseases Caused by Protozoa

R

Abs Jour : Ref ZhurBiol., No 5, 1959, 21428

Author : Sokolova, M.A.

Inst : Turkmen Institute of Abiculture

Title : The Blood's and Liquor's Sugar Levels in an Experimental Trypanosomosis of Camels (Su-auru).

Orig Pub : Tr. Turkm. s.-kh. in-ta, 1957, 9, 323-326

Abstract : It was demonstrated that at the beginning of the camels becoming sick with trypanosomosis, the blood's sugar content rises to 230-277 mg percent (in healthy camels the blood's sugar content amounts to 60-139 mg percent). Subsequently, its content decreases and reaches 56-66 mg percent. Simultaneously with its increase in blood, an increase of the sugar's quantity is observed in the cerebrospinal fluid. When the animals are treated with

Card 1/2

USSR/Diseases of Farm Animals - Diseases Caused by Protozoa

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Abs Jour ; Ref Zhur Biol., No 5, 1959, 21428

naganin, the blood picture is restored with the progress of their recovery. The sugar content, however, remains low for a long period of time returning to normal 80-90 days later. -- From the author's summary.

Card 2/2

- 32 -



KAMINSKIY, V.S., kand. tekhn. nauk; SOKOLOVA, M.A., kand. tekhn. nauk

Preparation of Tkibuli coals by the centrifugal method. Obog. i  
brik. ugl. no.7:16-23 '58. (MIRA 12:7)

(Tkibuli--Coal preparation) (Centrifuges)

DUKEL'SKIY, Aleksandr Iosifovich, prof., doktor tekhn.nauk; SOKOLOV,  
Mark Aleksandrovich, dotsent; SANDLER, N.V., red.; DROZHZHINA,  
L.P., tekhn.red.

[Mechanization of loading and unloading operations] Mekhanizatsiia  
peregruzochnykh rabot v morskikh portakh. Izd.2., perer. Lenin-  
grad, Izd-vo "Morskoi transport," 1959. 302 p. (MIRA 13:3)  
(Harbors) (Cargo handling)

STROGICH, Semen Grigor'evich; SOLODOVA, M.F., red.

[Present-day methods of calculating elements in industrial construction and civil engineering: a manual for groups improving their qualifications] Sovremennyye metody rascheta i konstruktsii v promyshlennom i grazhdanskom stroitel'stve, ustoiivoe posobie dlia grupp povysheniia kvalifikatsii. Moskva: Voen. nachalnyi stroitel'nyi tekhnikum, 1963. 154 p. (MIRA, 1964)

1ST AND 2ND CRUIERS																										3RD AND 4TH CRUIERS																									
PROCESSES AND PROPERTY INDEX																										PROPERTY INDEX																									
<p>ca</p> <p><b>Recovery of metallic tin from its chlorides</b> G. G. Tra- rov and M. A. Sobolev. <i>Bull. acad. sci. U. R. S. S. S.</i> <i>Classe sci. chim.</i> 1940, No. 5, 739-40 (in English, 740-500). The systems <math>Zn + SnCl_2 \rightarrow Sn + ZnCl_2</math> and <math>Zn + SnCl_4 \rightarrow ZnCl_2 + SnCl_2</math> were investigated by thermal analysis. The reaction of Zn with <math>SnCl_4</math> is irreversible and rapid. The reduction of <math>SnCl_4</math> by passing <math>SnCl_4</math> vapors through fused metallic Zn did not give satisfactory results. With liquid <math>SnCl_4</math> and fused Zn at <math>450^\circ</math> Sn is formed directly without intermediate formation of <math>SnCl_2</math>. There are formed an upper layer of pure <math>ZnCl_2</math> and a lower layer of a Sn-Zn alloy. Tin can be recovered from the lower layer by treating the fused alloy with <math>SnCl_4</math>. References: English summary. S. Machelson.</p>																										<p>9</p>																									
<p>WATERGAS INDEX</p> <p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																										<p>PROPERTY INDEX</p>																									

6

PROCESSING AND PROPERTIES INDEX

Study of the substitution reaction  $Zn + PbCl_2 = Pb + ZnCl_2$  by the method of thermal analysis. (G. G. Urazov and M. A. Sokolova. *J. Gen. Chem.* (U. S. S. R.) 14, 40-50 (1944).) Thermal analysis showed that the interaction of Zn and  $PbCl_2$  goes almost exclusively to the formation of metallic Pb and  $ZnCl_2$ ; this makes it possible to free Pb of Zn by treatment with  $Cl_2$  or molten  $PbCl_2$ . The reaction goes quantitatively to the right at temps. between sepn. of first crystals and complete solidification of the melt; at higher temps. there is a slight tendency for the reverse reaction.  $PbCl_2$  can be sepl. from  $ZnCl_2$  by the use of metallic Zn, which yields the top layer of  $ZnCl_2$  and bottom layer of Pb; these layers are readily separable. O. M. Kowlapuff

ASAC-35A METALLURGICAL LITERATURE CLASSIFICATION

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND ORDER PROCESSING AND PROPERTIES INDEX 2

CA

Investigation of the system  $\text{AgCl} + \text{PbS} = \text{PbCl}_2 + \text{Ag}_2\text{S}$  by methods of thermal analysis and microstructure. G. G. Urusov and M. A. Sokolova. *Ann. scienc. anal. phys. chim., Ind. chim. sta. (U.R.S.S.)* 14, 317-37 (1941).—The melting diagram of this system is characterized by 4 areas corresponding to the crystn. of the 4 components. The geometry of the diagram indicates that at high temps. when the components are in a molten state the equil. of  $\text{AgCl} + \text{PbS} = \text{PbCl}_2 + \text{Ag}_2\text{S}$  is changeable. As the temp. is lowered, the equil. shifts to the right; when the melt solidifies, the reaction is complete to the right. The diagram further indicates that the reaction products can form either of the 3 ternary systems  $\text{PbCl}_2$ ,  $\text{Ag}_2\text{S}$ , and  $\text{AgCl}$ , or  $\text{PbCl}_2$ ,  $\text{Ag}_2\text{S}$ , and  $\text{PbS}$ . Each of these ternary systems is characterized by 3 areas each of which represents the crystn. of the individual components. These 3 areas in each case meet in a single point, which is the eutectic for the given 3 components. For the system  $\text{PbCl}_2$ - $\text{Ag}_2\text{S}$ - $\text{AgCl}$  the eutectic, m.  $810^\circ$ , has the compn.  $\text{PbCl}_2$  84,  $\text{Ag}_2\text{S}$  2.4, and  $\text{AgCl}$  42.6 mol. %. The eutectic of the 2nd system m.  $423^\circ$  and has the compn.  $\text{PbCl}_2$  87.0,  $\text{Ag}_2\text{S}$  11.3, and  $\text{PbS}$  31.7 mol. %. The results show that  $\text{AgCl}$  and  $\text{PbS}$  cannot coexist. Thus, when  $\text{PbS}$  and  $\text{Ag}_2\text{S}$  are chlorinated, the former should be chlorinated first and then the  $\text{Ag}_2\text{S}$ . M. Hosh.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNDICATE

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1

STUDY OF THE EXCHANGE REACTION  $Zn + PbCl_2 \rightleftharpoons Pb + ZnCl_2$  BY THERMAL ANALYSIS. G. G. PRAZOV AND M. A. SOKOLOVA (*Zhur. Obshch. Khim.*, 1914, 14, (1-2), 40-50). [In Russian.] The reaction between zinc and lead chloride proceeds practically to completion in the direction of forming lead and zinc chloride. N. A.

ASS. 55.4 METALLURGICAL LITERATURE CLASSIFICATION

SOKOLOVA, M.A.

~~Study of  $\text{SnS} + \text{Fe} \rightleftharpoons \text{Sn} + \text{FeS}$  reaction at high temperatures.~~  
Izv. Sekt. fiz. khim. anal. 18:186-200 '49. (MIRA 11:4)

1. Institut obshchey i neorganicheskoy khimii im. M.S. Kurnakova  
AN SSSR.

(Iron) (Tin sulfide) (Systems (Chemistry))



SOKOLOVA, M. A.

27 27 27 27

✓ The system  $\text{BiCl}_3 + 3\text{Ag} \rightleftharpoons 3\text{AgCl} + \text{Bi}$ . M. A. Sokolova. *Izvest. Sektora Fiz. Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk U.S.S.R.* 21, 159-71(1952). — The system  $\text{BiCl}_3 + 3\text{Ag} \rightleftharpoons 3\text{AgCl} + \text{Bi}$  was studied by the thermal-analysis and microstructure methods in order to det. the conditions for sepn. of Bi from Ag. The reaction considered is partially reversible and the equil. is displaced toward the formation of  $\text{AgCl-Bi}$ . When fused, metals and chlorides formed mix only slightly: there is a metallic layer at the bottom and a layer consisting of chlorides at the top. These two layers can be sepd. The region of sepn. occupies a major part of the phase diagram in the form of an irregular pentagon. The best yield of Bi is obtained when  $\text{BiCl}_3$  is in an excess close to the diagonal  $\text{AgCl-Bi}$ . Max. purity of Bi is then 95 at. %. In the system  $\text{BiCl}_3\text{-Bi}$  an unstable compd.  $\text{BiCl}$  is formed in the region of sepn. At the temp. of initial crystn. ( $320^\circ$ ) the bottom layer contains 97 at. % Bi and the top layer 50 at. % Bi.  $\text{BiCl}$  is partially decompd. into  $\text{BiCl}_3$  and metallic Bi.

A. Libuckij

*SOKOLOVA, M.A.*

SOKOLOVA, M.A.; URAZOV, G.G.; KUZNETSOV, V.G.

Study of the system  $\text{BiCl}_3$  — Bi. Khim.redk.elem. no.1:102-114  
'54. (MIRA 8:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova  
AN SSSR.  
(Bismuth)

URAZOV, G.G.; SOKOLOVA, M.A.

Study of the system Bi - BiBr<sub>3</sub>. Izv.Sekt.fiz-khim.anal. 24:151-159  
'54. (MIRA 8:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova  
Akademii nauk SSSR.  
(Bismuth)

URAZOV, G.G.; SOKOLOVA, M.A.

Study of the system: Bi -- BiI<sub>2</sub>. Izv.Sekt.fiz.-khim.anal. no.25:  
117-127 '54. (MIRA 8:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova  
Akademii nauk SSSR.  
(Bismuth) (Iodides)

SOKOLOVA, M.A.

7  
1124. EXTRACTION OF PHENOLS FROM GENERATOR TARS. Sokolova, M.A.  
(Nauch. Trud. Mosk. Tekhn. Inst. Legk. Prom. (Sci. Proc. Moscow Tech. Inst. Light Ind.), 1955, vol. 6, 70-74; abstr. in Chem. Abstr., 1957, vol. 51, 13362). Generator tar, containing 13.5% moisture has been dehydrated by distillation with benzene. By further distillation at 5 mm mercury 42.6% of acid oils and 57.4% of pitch were obtained. The acid oils contained 62% phenols and 0.2% carboxylic acids. By acetylation, 9% of the -OH groups in the phenols were obtained. By direct treatment of raw tar with ammonium stearate, 55% of the phenols were obtained. C.A.

3  
4E3d  
4E2e  
11 4E4j

NS m2

SOKOLOVA, M.A.

Study of the system: Ni - S (from 30,0 to 50,0 atomic % S). Zhur.neorg.  
khim. 1 no.6:1440-1454 Je '56. (MLRA 9:10)

(Nickel sulfides)

Sokolova, M.A.

✓ The nickel-sulfur system having 30-50 atomic % sulfur.  
M. A. Sokolova. *Proc. Acad. Sci. U.S.S.R., Sect. Chem.*  
106, 59-62 (1953) (English translation).—See C.A. 50, 10502g.  
B.M.R. *chem.* L  
m

*Sokolova, M.A.*

USSR/ Chemistry

Card 1/1      Pub. 22 - 30/54

Authors      : Sokolova, M. A.

Title      : Investigation of the Ni - S system from 30.0 to 50.0 at. % of S

Periodical   : Dok. AN SSSR 106/2, 286-289, Jan 11, 1956

Abstract    : The Ni-S system was investigated at concentrations ranging from 30.0 to 50.0 at. % S by means of thermal, microstructural, x-ray, pressure discharge, electro-conductivity and specific weight methods. The various phases of the Ni-S system were established. The existence of a NiS compound in two modifications was confirmed. The results obtained by the different methods are described. Nine references: 6 Germ., 2 Swedish and 1 Ital. (1908-1947). Diagrams.

Institution : Acad. of Sc., USSR, Inst. of Gen. and Inorgan. Chem. im. N. S. Kurnakov

Presented by: Academician G. G. Urazov, May 10, 1955



*Sokolova, M. A.*

82076

S/190/60/002/01/04/021  
B004/B061

5.3830A

AUTHORS:

Ivanov, V. S., Sokolova, M. A., Aver'yanov, S. V.,  
Yevdokimov, V. F., Gurlyand, I. S.

TITLE:

Radiation Polymerization of Isoprene. I

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960. Vol. 2, No. 1.  
pp. 35-37

TEXT: The aim of this work was to obtain data on the action of the conditions of irradiation with gamma rays of  $\text{Co}^{60}$  on the polymerization of isoprene. Pure isoprene was irradiated in glass ampoules in an experiment in the apparatus PVT-400 (GUT-400, 142 gram equivalent of radium), in further tests in the apparatus K-1400 (K-1400, 1400 gram equivalent of radium) at room temperature in a nitrogen atmosphere. The molecular weight of the polymers was determined viscometrically. X and the microstructure (containing 1,2-, 3,4- and 1,4-bonds) by infrared spectra (taken with a MKC-6 (IKS-6) spectrometer). The results are given in a Table. One polymer was obtained by the action of

Card 1/2

Radiation Polymerization of Isoprene. I.

S/190/60/002/01/01/021

B004/B061

82076

gamma rays of  $\text{Co}^{60}$  whose yield is directly proportional to the radiation dose, with small fluctuations of the radiation intensity. The microstructure of the polymer in the temperature range 40 - 20°C is independent of the dose and intensity of radiation, and of the presence of a sensitizer (5 mole%  $\text{CCl}_4$ ). The average molecular weight of the polymer rises when the radiation intensity is decreased. The authors thank G. S. Denisov for advice and help in taking the infrared spectra. There are 1 table and 4 references. 4 US

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED July 7, 1959

X

Page 2/2

SOKOLOVA, M.A.

2

S/576/61/000/000/020/020  
E021/E120

AUTHORS: Kuznetsov, V.G., Yeliseyev, A.A., Shpak, Z.S.,  
Palkina, K.K., Sokolova, M.A., and Dmitriyev, A.V.

TITLE: Study of the phase diagram and the electrical  
conductivity of the phases of the Ni-S, Ni-Se and  
Co-S systems

SOURCE: Soveshchaniye po poluprovodnikovym materialam, 4th.  
Voprosy metallurgii i fiziki poluprovodnikov;  
poluprovodnikovyye soyedineniya i tverdyye splavy.  
Trudy soveshchaniya. Moscow, Izd. vo AN SSSR, 1961.  
Akademiya nauk SSSR. Institut metallurgii imeni  
A.A. Baykova. Fiziko-tekhnicheskiy institut. 159-173.

TEXT: Information on the phase diagram and electrical  
conductivity of the phases of the systems Ni-S, Ni-Se and Co-S  
is important for the technology of extraction of nickel, cobalt,  
selenium and sulphur from their ores and also for the search for  
new semiconducting materials. The present investigation was  
therefore carried out. Detailed X-ray analysis, differential  
thermal analysis and measurements of density were carried out.

Card 1/4

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Study of the phase diagram and the ... S/576/61/000/000/020/020  
E021/E120

Electrical conductivity in the range 20 to 440 °C was measured, and in general showed a steady fall as the temperature increased. The results showed that in solid solutions based on  $\beta$ -NiSe or  $\beta$ -CoS with a defect nickel arsenide structure and a content of selenium or sulphur greater than 51.6 atomic %, a superlattice is formed. This is explained by ordering of defects in the lattice in Ni or Co positions. The following structures were found to exist:  $\text{Ni}_4\text{S}_{12}\text{Se}_x$  - hexagonal with parameters at 650°C of  $a = 5.43 \pm 0.01\text{kX}$ ,  $c = 12.02 \pm 0.01\text{kX}$  and  $c/a = 2.211$ ;  $\text{Ni}_9\text{S}_8$  - hexagonal with  $a = 12.10 \pm 0.1\text{kX}$ ,  $c = 12.28 \pm 0.01\text{kX}$ ,  $c/a = 0.932$  in a lattice of six  $\text{Ni}_9\text{S}_8$  groups;  $\text{Ni}_6\text{S}_6$  - hexagonal with  $a = 3.77 \pm 0.01\text{kX}$ ,  $c = 15.86 \pm 0.02\text{kX}$ ,  $c/a = 4.202$ ;  $\text{Ni}_{21}\text{S}_{20}$  - hexagonal with  $a = 7.95 \pm 0.01\text{kX}$ ,  $c = 9.76 \pm 0.01\text{kX}$ ,  $c/a = 1.227$ ;  $\beta$ - $\text{Ni}_3\text{S}_{20}$  - tetragonal with parameters at 650 °C of  $a = 7.60 \pm 0.01\text{kX}$ ,  $c = 6.22 \pm 0.01\text{kX}$ ,  $c/a = 0.818$ .

It was shown that  $\text{NiS}_2$  has semiconducting properties. The phases  $\beta$ -NiS,  $\beta$ -NiSe and  $\beta$ -CoS with a nickel-arsenide structure and  $\beta$ -CoS,  $\beta$ -NiSe with a nickel-arsenide superlattice, and also

Card 2/4

3

Study of the phase diagram and the ... S/576/61/000/000/020/020  
E021/E120

$\alpha$  NiS with a millerite-type structure, behave below 300 °C as semi-metals, but  $\beta'$  CoS with 55.22 at.% S and  $\beta'$  NiSe with 52.3 at.% Se have a tendency to semiconducting type of conductivity. The phases  $\alpha$  Ni<sub>3</sub>S<sub>2</sub>,  $\alpha$  Ni<sub>3</sub>Se<sub>2</sub>, Co<sub>9</sub>S<sub>8</sub>, NiSe<sub>2</sub> and mixtures of  $\alpha$  Ni<sub>3</sub>S<sub>2</sub> with Ni,  $\alpha$  Ni<sub>3</sub>Se<sub>2</sub> with Ni and Ni<sub>6</sub>Se<sub>5</sub>, Co<sub>9</sub>S<sub>8</sub> with Co, have metallic conductivity. The c/a ratio is close to the ideal nickel-arsenide structure in the case of  $\beta$  NiS (c/a = 1.555) but the tendency to semiconducting properties is greater for  $\beta'$  CoS (c/a = 1.534) and  $\beta'$  NiSe (c/a = 1.463). This is a deviation from the prediction by W.B. Pearson (Ref.20: Canadian J. of Physics, 1957, v.35, 8, 886) that phases with nickel-arsenide structure would have semiconducting type of electrical conductivity. Detailed information is given on the limits of homogeneity and phase structure of Ni-S, Ni-Se and Co-S systems and also the interatomic distances in sulphides and selenides of nickel and cobalt selenide. There are 2 figures, 2 tables and 32 references; 7 Soviet-bloc and 25 non-Soviet-bloc.  
Card 3/4

3

Study of the phase diagram and the ... S/576/61/000/000/020/020  
E021/E120

The four most recent English language references read as follows:

Ref. 7: T. Rosenqvist, J. Iron Steel Inst., 1954, v.176, 37.

Ref.16: M. Hansen. Constitution of Binary Alloys, 1958,  
2nd publication.

Ref.20: W.B. Pearson, Canadian J. of Physics, 1957, v.35, 8, 886.

Ref.23: M.A. Peacock, Amer. Mineralog., 1947, v.32, 484.

Card 4/4

KUZNETSOV, V.G.; SOKOLOVA, M.A.; PALKINA, K.K.; POPOVA, Z.V.

Cobalt-sulfur system. Izv. AN SSSR. Neorg. mat. 1 no.5:675-689 My  
'65. (MIRA 18:10)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN  
SSSR.

SOKOLOVA, M.D.

*Lentinus lepideus* (Burb. Fr., a destroyer of wood. Ukr. bot. zhur.  
15 no.2:96-98 '58. (MIRA 11:6)

1. Institut botaniki AN URSR, viddil mikologii.  
(Kiev Province--Wood-decaying fungi)



SOKOLOVA, M.D.

New Ukrainian species of fungi from the Fungi Imperfecti. Ukr.  
bot.zhur. 16 no.6:83-84 '59. (MIRA 13:5)

1. Institut botaniki AN USSR, otdel mikologii.  
(Ukraine--Deuteromycetes)

SOKOLOVA, M.D.

New and little-known species of fungi in the flora of the Ukrainian  
S.S.R. Ukr. bot. zhur. 20 no.4:111-113 '63. (MIRA 17:4)

1. Institut botaniki AN UkrSSR, laboratoriya mikologii.

KAZANSKIY, Yu.F.; FEROZIO, G.N.; SOKOLOVA, M.F.

Epigenetic montmorillonite from Mesozoic deposits of the West  
Siberian Lowland. Dokl. AN SSSR 135 no.4:948-950 '60. (MIRA 13:11)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki  
i mineral'nogo syr'ya i Institut geologii i geofiziki Sibirskogo  
otdeleniya Akademii nauk SSSR. Predstavleno akademikom N.M.Strakhovym.  
(Siberia, Western--Montmorillonite)

KAZANSKIY, Yu.P.; SOKOLOVA, M.F.

Kaolinite minerals in Upper Cretaceous and Paleogene deposits in  
the middle Ob' Valley. Geol. i geofiz. no.11:23-29 '61.

(MIRA 15:2)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR  
i Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki  
i mineral'nogo syr'ya, Novosibirsk.

(Ob' Valley--Kaolinite)

SOKOLOVA, M.F.

Quantitative analysis of plankton in open and shore waters of  
Neva Bay. Uch.zap.Len.un. no.126:67-106 '49. (MLRA 9:6)

1.Laboratoriya gidrobiologii Biologicheskogo instituta.  
(Neva Bay--Plankton)

YARUSOV, S.S. ; SOLOLOVA, M.F.

Grasses

Lime and organic matter as factors in the growth of perennial grasses on sour soils.,  
Sov. agron., 10, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952 UNCLASSIFIED

DULETOVA, T.A.; ASTANKOVA, N.S.; VOLNYENKO, N.K.; KULAGIN, Yu.V.; SOKOLOVA, M.F.

Synoptic aerological conditions of the formation of fogs according to  
the data of Kazakhstan. Trudy KazNIGMI no.11:103-121 '59.

(MIRA 13:6)

(Kazakhstan--Fog)

SOKOLOVA, M.G.; SHAKH, K.F., tekhnik

Polyacrylamide is an efficient coagulation agent in  
papermaking. Bum.prom. 37 no.11:24-25 N '62. (MIRA 15:11)

1. Nachal'nik laboratorii Znamenskoy bumazhnoy fabрики.  
(Acrylamide) (Woodpulp)



С. С. Козлова, М. Г.

PHASE I BOOK EXPLOITATION 300,000

Moscow. Gosudarstvennyy soyuznyy zavod. Byuro tekhnicheskoy informatsii

Sbornik materialov po vakuunnoy tekhnike, vyp. XIV (Collection of Articles on Vacuum Engineering, No. 14; Moscow, Gosenergizdat, 1956. 103 p. 500 copies printed.

Eds.: R.A. Milenler, Chief Engineer of the Plant (General Ed.); A.G. Aleksandrov, V.D. Vladimirov; Ed. I.L. Igiltayn; Tech. Ed.: K.P. Voronin.

PURPOSE: This collection of articles is intended for specialists in vacuum technology and electronics.

COVERAGE: The collection contains five papers on electron tubes written by the engineering personnel of the Gosudarstvennyy soyuznyy zavod (State Union Plant). No personalities are mentioned. References accompany all but one of the articles.

Parusnikov, V.M., V.S. Nikolayeva, and M.I. Sokolova. Production of Tungsten Wire 5 to 6 Microns in Diameter by the Electrolytic Etching Method

This paper deals with the work done at the refractory metals section of the plant in obtaining very thin tungsten wires by electrochemical etching. This metal fiber is needed for production of grids in a new type of receiving tube, for development of precision optomechanical instruments, and for other purposes. The first samples and experimental lots of this wire were produced in 1949 and 1950. These first samples were 5 microns in diameter. Later, with improved equipment, 6 micron fiber was obtained in regular factory production lots. According to non-Soviet data, wire 3 microns in diameter has been produced under laboratory conditions in the United States. A description of the etching process, the equipment used, and some characteristics of the wire, are given.

51

Dizman, A.M. Equipment for Measuring Conversion Transconductance The author describes equipment developed by himself and B.I. Jendin for measuring conversion transconductance in 1A1P and 1A2P type tubes. The general testing capacity of the equipment is 300 to 350 tubes per hour.

60

4

KORABEL'NIKOV, I.D., prof.; SOKOLOV, M.I.

One thousand resections of the stomach with a single-row suture.  
Khirurgiia 35 no.7:128-132 J1 '59. (MIRA 12:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.D. Korabel'nikov) Chelyabinskogo meditsinskogo instituta i khirurgicheskogo otdeleniya bol'nitsy (glavnyy khirurg M.I. Sokolov) g. Zlatuosta.  
(GASTRECTOMY)

SOKOLOVA, M.I.

Study of the system  $\text{BiCl}_3 + 3\text{Ag} \rightleftharpoons 3\text{AgCl} + \text{Bi}$ . Izv. Sekt. fiz.-khim. anal. 21:  
159-171 '52. (MLRA 6:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova Akademii  
nauk SSSR. (Systems (Chemistry)) (Bismuth) (Electrometallurgy)

BARABASHCHUK, O.V.; BAKHMUT, P.G. [Bakhmut, P.H.]; GUBINA, K.M. [Hubina, K.M.]; DEMYANKO, M.D.; KALITA, S.M.; KARACHENTSZEVA, L.S.; KOH-DRAT'YEVA, V.I.; KORZACHENKO, M.N.; LITVINOVA, N.M. [Litvienova, N.M.]; SOKOLOVA, M.I.; STORONSKAYA, O.Y. [Storons'ka, O.I.]; TRINKINA, N.V.; TONKIKH, P., otv. za vypuska; MARCHENKOV, S., red.; KURITSA, G. [Kuritsa, H.], tekhn.red.

[Economy of Drogo bych Province; statistical collection] Narodne hospodarstvo Drohobyts'koi oblasti; statystychnyi zbirnyk. Drohobyh, 1958. 158 p. (MIRA 12:11)

1. Drogo bych (Province) Statisticheskoye upravleniye. 2. Statisticheskoye upravleniye Drogo bychskoy oblasti (for all except Tonkikh, Marchenkov, Kuritsa).

(Drogo bych Province--Statistics)

KRAVCHIK, E.D., inzh.; SOKOLOVA, M.I., inzh.

Asynchronous motors with powder aluminum stator winding.  
Elektrotehnika 35 no.1:36-37 Ja '64. (MIRA 17:2)

SOKOLOVA, M.K., meditsinskaya sestra (Moskva)

Diet for sick infants. Med. sestra 15 no.3:28-29 Mr '56. (MLBA 9:6)  
(DIET IN DISEASE) (INFANTS--NUTRITION)

37909

S/054/62/000/002/005/012  
B163/3138

9,2180

AUTHORS: Abolin'sh, Ya. Ya., Sokolova, M. M., Shultin, A. A.  
TITLE: The spectral distribution of the opto-acoustic effect in Seignette's salt in the region  $2000-6000 \text{ cm}^{-1}$   
PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1962, 66-68

TEXT: Earlier experiments by Gross, Abolin'sh, and Shultin (ZhTF, 26, 2255, 1958) on the observation of the opto-acoustic effect with intermittent white light are extended to an investigation of its spectral distribution. A crystal plate (X-cut) of Seignette's salt is irradiated with modulated infrared radiation from a globar radiation source through a prism-spectrometer MKC-6 (IKS-6) with a rock salt prism as monochromator. Electric charges appear on the faces perpendicular to the X-section when the crystal is irradiated. The corresponding voltage, which varies with the modulation frequency, is amplified and the spectrum of the opto-acoustic signal is recorded with a potentiometer MCP 1-01 (PSR 1-01). The spectrum is corrected for the spectral intensity distribution of

Card 1/1

The spectral distribution of the ...

S/054/62/000/002/005/012  
E163/E138

the radiation source. It has some distinct maxima which correspond to optical excitations of intramolecular oscillations. This interpretation is consistent with the assumption that the opto-acoustic effect is due to non-radiative transitions from optically excited intramolecular oscillations to the lattice. The table gives an interpretation of the maxima in the spectrum of the opto-acoustic signal. There are 2 figures and 1 table.

SUBMITTED: January 29, 1962

Card 2/0.2



*SOKOLOVA, M.M.*

SOKOLOVA, M.M.

Development of an extinguishing inhibition in narcotization and its relation to the persistence of conditioned reflexes. *Fiziol. zhur.* (MLRA 8:2)  
40 no.6:661-667 N-D '54.

1. Kafedra normal'noy fiziologii Peditricheskogo meditsinskogo instituta, Leningrad.

(REFLEX, CONDITIONED.

eff. of ethyl alcohol on extinguishing inhib. & reflex resist. in animals)

(ALCOHOL, ETHYL, effects.

on conditioned reflex resist. & extinguishing inhib. in animals)

SOKOLOVA, M.M.

Reaction to stress of the adrenal cortex in newborn animals [with  
summary in English]. Biul. eksp. biol. i med. 44 no.10:44-46 0 '57.  
(MIRA 11:2)

1. Iz laboratorii evolyutsii sekretornykh i vydelitel'nykh protsessov  
(zav. - chlen-korrespondent AMN SSSR A.G.Ginetsinskiy) Instituta  
evolyutsionnoy fiziologii imeni I.M.Sechenova (dir. - akademik L.A.  
Orgeli) Akademii nauk SSSR. Predstavlena akademikom L.A.Orbeli.

(STRESS, effects,

on adrenal cortex in newborn animals, eosinophil count)  
(ADRENAL CORTEX, physiology,

eff. of stress in newborn animals, eosinophil count)  
(EOSINOPHIL COUNT,

eff. of stress in newborn animals)

GINETSINSKIY, A.G., VASIL'YEVA, V.F., ZAKS, M.G., SOKOLOVA, M.M., SOO, V.A.

Method for determining changes in elasticity of the female breast.

Akush. i gin. 34 no.5:104-106 S-0 '58

(MIRA 11:10)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-korrespondent  
AMN SSSR P.A. Beloshapko) AMN SSSR i Institut evolyutsionnoy fiziologii  
imeni I.M. Sechenova (dir. - akad. L.A. Orbeli) AN SSSR.

(BREAST, physiol.

capacity fuot., method of determ. (Rus))

IVANOVA-BERG, M.M.; SOKOLOVA, M.M.

Seasonal changes in blood composition of fresh-water lampreys  
(*Lampetra fluviatilis* L.). Vop. ikht. no.13:156-162 '59.  
(MIRA 13:3)

(Lampreys) (Blood--Analysis and chemistry)

VASIL'YEVA, V.F.; LICHKO, A.Ye.; SOKOLOVA, M.M.

Mechanism of controlling insulin coma by intravenous infusions  
of glucose. Biul. eksp. biol. i med. 48 no.9:46-50 S '59.

(MIRA 13:1)

1. Iz Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova  
(direktor - akademik L.A. Orbeli [deceased]) AN SSSR, Leningrad.  
Predstavlena akademikom L.A. Orbeli [deceased].

(INSULIN)

(GLUCOSE)

SOKOLOVA, M.M.

Effect of acetylcholine on sorptive properties of the muscle tissue.  
Mat. po evol. fiziol. 4:173-178 '60. (MIRA 13:10)  
(ACETYLCHOLINE) (MUSCLE) (SORPTION)

ITINA, N.A.; SOKOLOVA, M.M.

Excitability and lability of muscle fibers growing outside the  
organism. Mat. po evol. fiziol. 4:179-184 '60. (MIRA 13:10)  
(TISSUE CULTURE)

ZAKS, M.G.; SOKOLOVA, M.M.

Role of potassium in the adaptation of lugworm tissues to hypotonic media. TSitologiya 2 no.4:448-453 J1-Ag '60. (MIRA 13:9)

1. Laboratoriya evolyutsii vydelitel'nykh i sekretornykh protsessov Instituta evolyutsionnoy fiziologii AN SSSR, Leningrad.  
(POTASSIUM CHLORIDE—PHYSIOLOGICAL EFFECT) (POLYCHAETA)



ZAKS, M.G.; SOKOLOVA, M.M.

Mechanisms of adaptation to changes in the salinity of water in the  
sockeye salmon (*Oncorhynchus nerka* (Walb.)). Vop.ikht. 1 no.2:333-  
346 '61. (MIRA 14:6)

1. Laboratoriya evolyutsii vydelitel'nykh protsessov Instituta  
evolyutsionnoy fiziologii imeni I.M.Sechenova AN SSSR.  
(Pacific Ocean—Salmon) (Salinity) (Adaptation (Biology))

ZAKS, H.G.; SOKOLOVA, N.N.

Immunological serological distinctions between individual red salmon  
stocks. Vop. ikht. i no. 4:707-715 '61. (MIRA 14:12)

I. Institut evolyutsionnoy fiziologii imeni I.M.Sechenova  
AN SSSR, Laboratoriya vydelitel'nykh protsessov, Leningrad.  
(DISTRAYA RIVER (KAMCHATKA) SALMON)  
(SERUM DIAGNOSIS)

DUBNOV, M.V.; SOKOLOVA, M.M.

Effect of laparotomy on renal function in gynecological patients.  
Akush.i gin. 37 no.2:84-89 F '61. (MIRA 14:3)

1. Iz otdeleniya operativnykh metodov lecheniya (zav. - prof. M.V. Dubnov) Instituta akusherstva i ginekologii AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. P.A. Beloshapko) i Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova AN SSSR (i.o. dir. - chlen-korrespondent AMN SSSR prof. A.G. Ginetsinskiy).

(KIDNEY)

(ABDOMEN—SURGERY)

ZAKS, M.G.; SOKOLOVA, M.M.

Ontogenic and species characteristics of the glandula nasalis in  
certain sea birds. Fiziol. zhur. 47 no. 1:108-114 Ja '61.

(MIRA 14:3)

1. From the Sechenov Institute of Evolutional Physiology, U.S.S.R,  
Academy of Sciences, Leningrad.

(SEA BIRDS)

(GLANDS)

VIL. IROV, Ya.A.; SONOLOVA, I.I.

Absorption of vital dyes by hair cells of the organ of Corti in the cochlea of the guinea pig under conditions of relative peace and during the action of sound stimuli. Dokl. AN SSSR 137 no. 1:236-239 Mar-Apr '61. (MIRA 14:2)

1. Institut evolyutsionnoy fiziologii im. I.M. Sechenova  
Akademii nauk SSSR. Predstavleno akademikom I.I. Shmal'gauzenom.  
(ABSORPTION (PHYSIOLOGY)) (LABYRINTH (EAR))  
(SOUND—PHYSIOLOGICAL EFFECT)

SAKS, M.G.; SOKOLOVA, H.M.

Establishing differences between individual schools of the sockeye salmon (*Oncorhynchus nerka* Wahlb.) by the precipitation reaction. Dokl. AN SSSR 139 no.6:1491-1494 Ag '61.  
(MIRA 14:8)

1. Institut evolutsiomnoy fiziologii im. I.M. Sechenova  
AN SSSR. Predstavleno akademikom V.N. Chernigovskim.  
(SOVIET FAR EAST—SALMON)  
(ANTIGENS AND ANTIBODIES)

ACCESSION NR: AT4042708

S/0000/63/000/000/0394/0397

AUTHOR: Petrukhin, V. G.; Sokolova, M. M.

TITLE: Morphological changes induced by acceleration

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963.  
Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 394-397

TOPIC TAGS: acceleration effect, morphological change, transverse acceleration, dog, monkey

ABSTRACT: Dogs and monkeys were subjected to transverse accelerations in a series of four experiments. In the first series, dogs were subjected to transverse accelerations of 8 g for a period of 3 min. In the second series, they were subjected to 12 g for 1 min. In the third series, they were subjected to 12 g for 3 min. In the fourth series, male monkeys were subjected to 12 g for periods ranging from 3 to 5 min (depending on appearance of electrocardiographic changes). All animals were killed either immediately after the completion of the experiment or 1, 3, 7, 15, 30, and 60 days after the experiment. Morphological investigation

Card 1/3

ACCESSION NR: AT4042708

indicated that the changes in the animal organs in all four series were identical. Animals killed immediately after the experiment showed marked hemodynamic changes. Blood was congested in the righthand chambers of the heart, in the pulmonary artery, in the portal vein, in the brain, in the kidneys, and in the liver. The myocardium was almost bloodless. Animals which were killed a day after the experiment, or later, did not show these hemodynamic changes. Macroscopic changes were seen only in the lungs. Microscopic examination of the brain, one hour after the conclusion of the experiment, showed a mild edema of the brain matter and connective tissues. A day later, dystrophic processes appeared in ganglial cells (chromatolysis, swelling, vacuolization), including the formation of shadow cells. These changes reached their maximum on the third day. By the seventh to fifteenth days, the ganglial cells of the cortex of the brain had a normal appearance. The phenomena of proliferation of glial cells continued to hold in some cases up to thirty or even sixty days. In cardiac tissue, one hour after the experiment, along with anemia and edema of the connective tissue, eosinophilia of the muscle fibers appeared. After a day, the edema diminished, while phenomena of protein dystrophy increased. After the third day, dystrophic processes gradually diminished, and by the fifteenth day, the myocardium resumed its normal structure. The lungs of all animals, one hour after the experiment, showed a marked plethora, especially on the dorsal side. The majority of the animals also

Card 2/3



ACCESSION NR: AT4042708

showed hemorrhages and edema. After one to three days, signs of the edema and the hemorrhages began to diminish, and by the seventh day the majority of the hemorrhages was reabsorbed. In the liver, by the end of one day, considerable venous congestion was observed accompanied by grainy and sometimes vacuolar dystrophy. Normal structure reappeared in the liver by the third to the seventh day. Plethora of the kidneys was observed an hour after completion of the experiment. Subsequently, grainy and sometimes vacuolar dystrophy developed in the epithelium of the convoluted canals. At the end of a month, however, no changes could be observed in the kidneys. The pathomorphological picture of the brain and the myocardium resembles changes encountered during hypoxia. Apparently, transverse accelerations cause a significant disruption of the supply of blood to the brain and to the myocardium. The majority of the changes in the morphological picture brought about by transverse accelerations, however, appears to be reversible

ASSOCIATION: none

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Card 3/3

EDALOV, Yu.F.; SOKOLOVA, M.M.

Preventive action of vitamin B<sub>15</sub> in experimental fatty infiltration of the liver. Farmakol. toksik. 26 no.3 355-358  
My-Js\*63 (MIRA 17:2)

ZAKS, M.G.; SOKOLOVA, M.M.

Effect of the antidiuretic hormone under conditions of osmotic diuresis. Fiziol. zhur. 49 no.5:532-534 My '63.

(MIRA 17:11)

1. From the Laboratory for Research on Evolution of Excretory Function Sechenov Institute of Evolutionary Physiology, Leningrad.

GINETSINSKIY, A.G. [deceased]; ZAKS, M.G.; IOFFE, V.I.; KRESTINSKAYA, T.V.;  
SOKOLOVA, M.M.; KHAY, L.M.

Change in the hyaluronidase and hyaluronic acid system in the  
rabbit kidney in experimental interstitial nephritis. Biul. eksp.  
biol. i med. 57 no.3:30-34 Mr '64.

(MIRA 17:11)

1. Institut evolyutsionnoy fiziologii (dir. - chlen-korrespondent  
AN SSSR G.M. Kreps) AN SSSR i Institut eksperimental'noy meditsiny  
(dir. - deystvitel'nyy chlen AMN SSSR prof. D.A. Biryukov) AMN  
SSSR, Leningrad. 2. Chlen-korrespondent AMN SSSR (for Ginetsinskiy).

I 10293-66 ESS-2/EWT(1)/ES(v)-3/EEC(k)-2/EWA(d) TT/RD/GW  
ACC NR: AP6000310 SOURCE CODE: UR/0293/65/003/006/0935/0939

AUTHOR: Natochin, Yu. V.; Sokolova, M. M.; Vasil'eva, V. F.; Balakhovskiy, I. S.

ORG: none

TITLE: Investigation of the kidney function of the Voskhod-1 crew

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 6, 1965, 935-939

TOPIC TAGS: human physiology, manned space flight, kidney function, water excretion, Voskhod 1, Komarov, Feoktistov, Yegorov

ABSTRACT: The kidney function of the Voskhod-1 crew was analyzed quantitatively and chemically. The subjects underwent tests in which they fasted between 1900 hr and 0700 hr. Urine samples were collected for this period. At 0700 they drank boiled water, constituting 2 percent of their body weight, for a period of 30 min. Urine was then collected at 30-min intervals for 2 hr. Chemical analyses consisted of: 1) the photometric determination (SF-4A apparatus) or creatinine in the urine and blood serum (glomerular filtration); 2) the flame photometric determination of blood and urine Na and K concentration; 3) the cryoscopic determination of liquid osmomolar concentration; 4) the Silber-Porter determination of 17-21 hydroxy-20-ketosteroids. The Smith method (H. Smith. Principles of Renal Physiology. N. Y., 1956) was used to quantitatively evaluate the osmoregulatory function of the kidneys. The results of these tests are given in Tables 1 and 2. It was concluded that the

Card 1/4

UDC: 629.198.61

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ACC NR: AP6000310

5

Table 1. Results of kidney function tests of the Voskhod-1 crew

Indices	V. M. Komarov			K. P. Feoktistov		B. B. Yegorov		
	Control 5.IX	2 days after flight 15.X	18 days after flight 1.XI	Control 5.IX	18 days after flight 1.XI	Control 5.IX	2 days after flight 15.XI	18 days after flight 1.XI
Nocturnal cycle								
1. Normal filtra- tion, ml/min	134	133	135	131	129	114	100	110
2. Osmotic urine concentration/plasma	3.45	3.8	3.3	3.9	2.8	1.65	2.5	1.9
3. Urine sodium con- centration, mg equiv/l	250	189	183	193	202	120	220	150
Water load								
4. % Water load excreted/2 hr	60	21	66	64	43	85	42	71
5. Maximum diuresis after water load, ml/min	14.0	2.7	15.9	12.7	11.2	15	12.2	14.8
6. Osmotic urine concentration/ plasma at heights of diuresis	0.26	0.93	0.19	0.18	0.46	0.17	0.26	0.25
7. Minimum urine sodium con- centration, mg equiv/l	15	30	5.9	7.8	12	6.9	5.0	5.7
8. $\text{CH}_2\text{O}$ at the height of diuresis, ml/min	10.4	0.19	12.9	10.4	6.05	12.3	9.0	9.0

Card 2/4

L 10293-66

ACC NR: AP6000310

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Table 2. 17-oxycorticosteroid, potassium, and sodium excretion by the Voshkod-1 crew

Indices	Y. M. Komarov						K. P. Frohlistov						B. B. Yegorov					
	Control			Before flight 11.X	After flight		Control			Before flight 11.X	After flight		Control			Before flight 11.X	After flight	
	1.IX	2.IX	1.X		14.X	15.X	1.IX	2.IX	1.X		14.X	15.X	1.IX	2.IX	1.X		14.X	15.X
17-OH steroids mg/day	6.4	8.8	6.5	6.7	8.5	3.7	4.8	1.0	8.5	5.5	5.8	3.7	5.8	2.8	4.1	3.6	7.4	2.5
17-OH steroids mg/g creatinine	3.5	4.8	3.2	3.5	4.0	2.1	2.9	1.7	4.7	2.9	3.1	2.0	4.1	1.7	2.2	2.3	4.0	1.4
K g/day	2.9	3.2	2.7	2.5	2.9	2.8	2.4	2.7	3.6	2.2	2.7	2.6	2.4	2.4	2.3	1.5	2.6	1.8
Na g/day	4.6	5.3	3.4	3.6	3.3	4.0	5.0	5.4	5.7	5.2	4.3	4.4	2.9	4.8	3.5	3.9	3.4	3.5
Ca/Na, g equiv.	0.36	0.35	0.44	0.4	0.5	0.4	0.27	0.29	0.36	0.24	0.36	0.34	0.44	0.29	0.4	0.22	0.44	0.3

Card 3/4

L 10293-66

ACC NR: AP6000310

water excretion by the Voskhod-1 crew was altered 2 days after the flight, based on the fact that their ability to eliminate water was decreased. This functional shift normalized after 18 days. It is hypothesized that, under the effect of space-flight stresses and especially during weightlessness, the water regulatory system adjusts to what seems to be elevated water and salt levels which increases the rate of water elimination. Upon return to terrestrial conditions the reverse is true, and water elimination progresses more slowly. Orig. art. has: 2 tables. [CD]

SUB CODE: 06/ SUBM DATE: 10Sep65/ ORIG REF: 006/ OTH REF: 002/ ATD PRESS:

4166

OC  
Card 4/4



ZAKS, M.G.; KRESTINSKAYA, T.V.; SOKOLOVA, M.M.

Effect of an antidiuretic hormone in hypopotassemia in rats. Fiziol.  
zhur. 50 no.12:1489-1495 D '64. (MIRA 18:9)

1. Institut evolyutsionnoy fiziologii i biokhimii imeni I.M.  
Sechenova AN SSSR, Leningrad.

ZAKS, M.G.; NATOCHIN, Yu.V.; SOKOLOVA, M.M.; TANASIYCHUK, O.F.; TVERSKOY, G.B.

Transport of sodium and potassium in the secretion of milk.  
Fiziol.zhur. 51 no.4:513-519 Ap '65. (MIRA 18:6)

1. Institut evolyutsionnoy fiziologii i biokhimii imeni Sechenova  
AN SSSR i Institut fiziologii imeni Pavlova AN SSSR, Leningrad.

ZAKS, M.G.; SOKOLOVA, M.M.

Mechanisms of the adaptation of some litoral organisms to desal-  
ination of the environment. Zhur. evol. biokhim. i fiziol. 1  
no. 6:538-542 N-u '65 (MIRA 19:1)

1. Laboratoriya razvitiya vydelitel'noy funktsii Instituta  
evolyutsionnoy fiziologii i biokhimii imeni I.M. Sechenova AN  
SSSR, Leningrad. Submitted April 3, 1964.

NATOCHIN, Yu.V.; DANSKER, V.L.; KEROVA, I.K.; LEONT'YEV, V.G.;  
SOKOLOVA, M.M.

Dehydrating nonosmotic action of the urea; based on experiments  
with the crystalline lens and the vitreous body. TSitologiya  
7 no.6:753-756 N-D '65.

(MIRA 1961)

1. Laboratoriya razvitiya vydelitel'noy funktsii Instituta  
evolyutsionnoy fiziologii i biokhimii AN SSSR; Nauchno-issledo-  
vatel'skiy neyrokhirurgicheskiy institut i Kafedra glaznykh  
bolezney Gosudarstvennogo instituta usovershenstvovaniya vrachey,  
Leningrad. Submitted April 16, 1965.